



DHEC's Office of Solid Waste Reduction and Recycling

For Your Information...

Economic and Environmental Benefits of Recycling

Recycling is one of the nation's top environmental success stories of the past 15 years.

Recycling also is an economic success story. In fact, did you know that the recycling industry in South Carolina has a \$1.4 billion economic impact?

Consider, first, some of the recycling numbers. Americans recycled about 68 million tons of materials in 2001 – more than double the amount recycled in 1990 according to the U.S. Environmental Protection Agency (U.S. EPA). The national recycling rate has almost doubled in the same period increasing from 16.2 percent in 1990 to 29.7 percent in 2001.

South Carolina has done its part.



South Carolinians recycled more than 1.31 million tons of materials in fiscal year (FY) 2003 (July 1, 2002 – June 30, 2003) and more than 7.7 million tons since FY 1998 according to the S.C. Solid Waste Management Annual Report for FY 2003. The state's recycling rate is 28.79 percent – among the top 15 states in the nation according to "Biocycle" magazine (January 2004 edition).

Why recycle?

There are lots of reasons.

- **Recyclables have value.** Recycling turns materials that would become waste into valuable resources. The recyclables you place in the bin or take to the drop-off center end up on the market as commodities that are bought and sold.
- **Recycling saves natural resources** like minerals, water and timber.
- **Recycling helps reduce or eliminate pollution** by decreasing the need to extract, transport and process raw materials.
- **Recycling saves energy.** Making products from recycled materials typically requires less energy than making products from raw materials. For example, making a new aluminum can from a recycled aluminum can saves 95 percent of the energy used to make a new aluminum can from raw materials. The energy saved from recycling one aluminum can will run a computer for three hours. The energy saved from recycling one glass bottle will run a 100-watt light bulb for four hours. You get the idea.
- **Recycling reduces the need to build landfills or incinerators.** As such, recycling helps protect the environment. And, typically, no one wants a new landfill built in their community.
- **Recycling reduces greenhouse gas emissions that contribute to global climate change.** In reducing air and water pollution and saving energy, recycling reduces emissions of carbon dioxide, methane, nitrous oxide and chlorofluorocarbons that may contribute to global climate change. Recycling helps reduce greenhouse gas emissions by (1) decreasing the energy needed to make products from virgin materials (and thereby reducing the burning of fossil fuels), (2) reducing emissions from landfills and incinerators, which are major sources of methane gas emissions and (3) slowing the harvest of trees, thereby maintaining the carbon dioxide storage benefit provided by trees.
- **Recycling may save money.** There is always an environmental and economic cost to any type of solid waste management, but recycling may be the least expensive approach with all things considered. Recycling one ton of materials in a typical curbside program saves at least \$265 in electricity, petroleum, natural gas and coal even after accounting for the energy used to collect and transport the materials, according to another recent study.
- **Recycling saves money in South Carolina schools.** Two school districts recently reported that together they are saving more than

\$32,000 annually in avoided disposal costs through recycling programs that collected aluminum cans, steel cans, plastic bottles, cardboard, magazines, office paper and newspapers. Another school district is saving \$25,000 annually in avoided disposal costs through its recycling program.

- **Recycling generates significant economic benefits.** Recycling protects and expands U.S. manufacturing jobs and increases America's competitiveness in the global market place.
- **Recycling is big business.** The recycling industry consists of about 56,000 establishments that employ more than 1.1 million people, generate an annual payroll of nearly \$37 billion and gross more than \$236 billion in annual revenues, according to the U.S. Recycling Economic Information (REI) Study. About 1.4 million jobs are "indirectly" supported by the recycling industry. These jobs have a payroll of about \$52 billion and produce about \$173 billion in receipts. The recycling industry also generated about \$12.9 billion in tax revenues.
- **Recycling stimulates the development of green technology.** Recycling allows for and encourages the development of more environmentally and economically friendly products. Waste tires are used in many applications including rubberized asphalt for paving roads. In fact, South Carolina is one of the nation's leaders in developing this technology through the work of the Asphalt Rubber Technology Service housed at Clemson University and funded through a grant provided by the S.C. Department of Health and Environmental Control (DHEC).

For more information, please call DHEC's Office of Solid Waste Reduction and Recycling at **1-800-768-7348** or visit www.scdhec.gov/recycle.



Recycling is big business in South Carolina.

A recent study completed by the S.C. Recycling Market Development Advisory Council (RMDAC) showed that recycling companies employ about 20,000 people in South Carolina with an estimated payroll of \$712 million. RMDAC estimates that for every \$1 of those wages, an indirect payroll of an additional \$1 is generated for a total impact of about \$1.4 billion in the state.



Wellman, Inc., the world's largest producer of polyester fiber from recycled plastic bottles, has a plant in Johnsonville that employs 650 people and creates a significant economic impact in the Pee Dee.

Nucor Steel, the largest recycler in North America, has multiple plants in South Carolina employing more than 1,700 people. Overall, the company annually converts more than 17 million tons of scrap steel into everything from appliances to shopping centers. In South Carolina, Nucor recycles scrap metal at a rate of 180 pounds every second of every day.

United Resource Recovery, located in Spartanburg, has only 44 employees. The company may not be considered a giant in the U.S. marketplace, but it has developed a patented technology for recycling plastic soft drink bottles and processed about 10 million pounds of plastics per year.

For more information, call RMDAC at **(803) 737-0239** or visit www.sccommerce.com.



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